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Gulf Region

Proceedings of the regional peer review meeting of the assessment of stock status of witch flounder *(Glyptocephalus cynoglossus)* from the Gulf of St. Lawrence, NAFO Divisions 4RST

February 22, 2012
Moncton, New Brunswick

Chairperson: Gérald Chaput

Fisheries and Oceans Canada
Science Branch
P.O. Box 5030
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Canada

Foreword

The purpose of these Proceedings is to document the activities and key discussions of the meeting. The Proceedings may include research recommendations, uncertainties, and the rationale for decisions made during the meeting. Proceedings may also document when data, analyses or interpretations were reviewed and rejected on scientific grounds, including the reason(s) for rejection. As such, interpretations and opinions presented in this report individually may be factually incorrect or misleading, but are included to record as faithfully as possible what was considered at the meeting. No statements are to be taken as reflecting the conclusions of the meeting unless they are clearly identified as such. Moreover, further review may result in a change of conclusions where additional information was identified as relevant to the topics being considered, but not available in the timeframe of the meeting. In the rare case when there are formal dissenting views, these are also archived as Annexes to the Proceedings.

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Aussi disponible en français :

*MPO. 2014. Compte rendu de l'examen par des pairs régional sur l'évaluation de l'état du stock de la plie grise (*Glyptocephalus cynoglossus*) du golfe du Saint-Laurent (division 4RST de l'OPANO), le 22 février 2012. Secr. can. de consult. sci. du MPO, Compte rendu 2014/019.*

SUMMARY

A regional advisory process meeting was held February 22, 2012 in Moncton (NB) to conduct a science peer review of the assessment of stock status of witch flounder (*Glyptocephalus cynoglossus*) from the Gulf of St. Lawrence (NAFO Div. 4RST). The science review was conducted in response to a request from DFO Fisheries and Aquaculture Management (FAM). Participants at the science review included science staff from the DFO Gulf, Maritimes and Newfoundland regions, personnel from DFO FAM, and from the fishing industry. The terms of reference for the meeting were addressed, excluding the question of ecosystem considerations. The products of the meeting include a science advisory report and a supporting research document.

SOMMAIRE

Une réunion du processus consultatif régional a eu lieu le 22 février 2012 à Moncton (Nouveau-Brunswick) afin de mener un examen scientifique par les pairs de l'évaluation de l'état du stock de la plie grise (*Glyptocephalus cynoglossus*) du golfe du Saint-Laurent (division 4RST de l'Organisation des pêches de l'Atlantique Nord-Ouest [OPANO]). Cet examen scientifique a été réalisé en réponse à une demande formulée par la Gestion des pêches et de l'aquaculture de Pêches et Océans Canada (MPO). Les participants à l'examen scientifique comprenaient des membres du personnel scientifique des régions du Golfe, des Maritimes et de Terre-Neuve-et-Labrador, des employés de la Gestion des pêches et de l'aquaculture du MPO, et des membres de l'industrie de la pêche. Le cadre de référence de la réunion a été abordé, à l'exception des considérations écosystémiques. Les résultats de la réunion comprennent un avis scientifique et un document de recherche à l'appui.

1. INTRODUCTION

The Department of Fisheries and Oceans (DFO) conducted a regional peer review meeting on February 22, 2012 in support of a request from DFO Fisheries and Aquaculture Management for an assessment of the stock status of witch flounder (*Glyptocephalus cynoglossus*) from the Gulf of St. Lawrence (NAFO Div. 4RST). The terms of reference for the peer review meeting are provided in Appendix 1.

The meeting began at 9:00 AM. The chair opened the meeting by welcoming the participants and reviewing the meeting room arrangements including the availability of simultaneous translation services for the meeting participants. The chair explained the process of requesting science advice, preparation of the meeting materials, the science review, and the expected outcomes. A science advisory report, a proceedings document and a research document(s) are the expected products of the meeting.

The chair reviewed the rules of exchange for the meeting, reminding participants that the meeting was a science review and not a consultation. As well, everyone at the meeting had equal standing as participants as there was no observer status at the meeting. Table microphones were provided to ensure good communication during the meeting. Finally, the objective was to achieve consensus on the status of the stocks and the conclusions relative to the terms of reference. For the purposes of the science review, consensus was taken as an absence of opposition.

The chair then invited the participants to introduce themselves; the list of participants is provided in Appendix 2.

The draft agenda was reviewed and accepted (Appendix 3).

There was one working paper to be reviewed. It was distributed by email to meeting participants on February 20, 2012.

Rapporteur duties were assigned to Eliane Aubry (DFO Science Gulf Region).

The working paper was presented by Doug Swain, DFO Science Gulf Region.

2. MAIN POINTS OF THE ASSESSMENT

- Landings have been below the 1000 t TAC since 2003 and were less than half the TAC in the last 3 years. 4R AND 4T usually contribute roughly equal proportions of the landings, but most of the landings in 2011 were from 4R.
- Observe an important decline in proportion of witch flounder > 40 cm in the commercial catches in the 2000s.
- Research vessel surveys from the northern Gulf (DFO Quebec Region) and the southern Gulf (DFO Gulf Region) are used to assess geographic distribution, size distribution and to develop an index of abundance for population modelling. Research vessel survey indices have been standardized to Western IIA equivalents.
- Observed shift in distribution of witch flounder with much fewer fish in the western Gulf in recent decade than was the case in the 1970s and 1980s.
- Surplus production model was used to estimate biomass since 1961. Management parameters of interest were derived from this model including a limit reference point. Of the versions of the surplus production model presented, model 7 was considered the most appropriate by the group. Models are detailed in the research document.

3. CONSIDERATIONS AND CONCLUSIONS

- There are no ageing data to verify if there have been changes in growth rates over time that could explain in part the reduced abundance of witch flounder of 40+ cm in length
- There are observed differences in the trends between the indices from the research vessel surveys and the sentinel fishery indices. There is no conclusive explanation for this although the geographic coverage of the surveys differs.
- Change in productivity may have occurred but the factor contributing to that, either change in growth rate, change in natural mortality, or combinations could not be examined with the data available.
- The term of reference on impacts of other fisheries on witch flounder was partially addressed as bycatch in fisheries targeting other species is included in the reported landings.
- Other than consideration of potential changes in the productivity parameter on decadal scales, no other ecosystem considerations were discussed. It was indicated that witch flounder are not an important component in grey seal diet data.

ADVISORY REPORT AND MEETING PRODUCTS

A draft of the advisory report was completed after the meeting. The draft report was circulated to meeting participants on March 7, 2012 and finalized on March 19, 2012.

The working paper should be upgraded into a research document and should include the corrections to the data and the resulting changes to the population model resulting from the review.

APPENDICES

Appendix 1. Terms of reference: Assessment of stock status of witch flounder (*Glyptocephalus cynoglossus*) from the Gulf of St. Lawrence, NAFO Divisions 4RST

Context

In support of a request for science advice from DFO Fisheries and Aquaculture Management, DFO Gulf Science Branch will review the status of witch flounder (*Glyptocephalus cynoglossus*) of the Gulf of St. Lawrence, NAFO Divisions 4RST. The most recent science advice was provided in 2007 (DFO 2007).

Objectives

Assessment of the status of witch flounder in the Gulf of St. Lawrence (NAFO Divisions 4RST) including:

- Description of management measures and catches to the end of 2011, including best estimates of total removals by all fisheries.
- Overview of species biology and characteristics (size at age, age at maturity, etc).
- Indicators of stock status and trends (commercial catch rates, research vessel survey indices) by size and age group (if available).
- To the extent possible, estimates of total biomass as derived from population models.
- To the extent possible, estimates of absolute fishing mortality rates for the stock.
- To the extent possible, develop reference points against which to assess stock status.
- Description of the impacts of fishing activities for witch flounder on other species and fish habitat.
- Description of the impacts of fishing activities for other species on witch flounder.
- Description of ecosystem components which are modifying the species abundance and population dynamics (for example temperature, predators, prey).
- To the extent possible, develop indicators of stock status which can be used to inform fisheries management on stock status in the intervening years of the multiannual assessment and management cycle.

Expected publications

CSAS science advisory report

CSAS proceedings report summarizing the discussions of the science review

CSAS research document(s)

Participation

DFO Science Branch
Other DFO Sectors
Provinces
External experts (to DFO)
Fishing industry
Aboriginal peoples

References

DFO, 2007. Stock assessment of witch flounder in the Gulf of St. Lawrence (NAFO Div. 4RST). DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2007/004.

Appendix 2. List of participants.

Name	Affiliation
Anderson, Paul	PEI Dependent Groundfish Association
Aubry, Eliane	DFO Science Gulf
Benoît, Hugues	DFO Science Gulf
Chaput, Gérald	DFO Science Gulf
Fowler, Mark	DFO Science Maritimes
Healey, Brian	DFO Science Newfoundland and Labrador
Hennessey, Frank	PEI Mobile Groundfish Fishermen's Association
Lemelin, Dario	MPO GEP Québec
McDonald, Mike	PEIFA
Morin, Rod	DFO Science Gulf
Savoie, Luc	DFO Science Gulf
Surette, Tobie	DFO Science Gulf
Swain, Doug	DFO Science Gulf
Wade, Elmer	DFO Science Gulf

Appendix 3. Meeting agenda.

Time	Wednesday February 22
8 30 – 9 00	Meeting room open
9 00 – 9 15	Introduction, review of agenda
9 15 – 10 30	○ Description of management measures, catches to the end of 2011 ○ Overview of species biology and characteristics ○ Indicators of stock status and trends
10 30 – 10 45	Break
10 45 – 12 15	○ Estimates of total biomass as derived from population models ○ Estimates of absolute fishing mortality rates for the stock. ○ Reference points against which to assess stock status. ○ Impacts of fishing activities for witch flounder on other species and fish habitat ○ Impacts of fishing activities for other species on witch flounder ○ Ecosystem considerations ○ Indicators of stock status to inform fisheries management in the intervening years of the multiannual assessment and management cycle
12 15 – 13 15	Lunch
13 15 – 17 00	Follow-up from the morning (if required) Review of draft advisory report
15 00 – 15 15	Break